Critical Connections

BURNOUT

AND

COVID-19

VOL. 21 NO. 2 // SPRING 2022
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## Clinical Spotlight: Burnout and COVID-19

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Editor’s Message

In This Issue:
Burnout and COVID-19

“A mal tiempo, buena cara,” my mother frequently told me during my residency years. It is a popular saying that revolves around the concept of mettle in the face of adversity. It advises us to maintain a good disposition and not to be discouraged or demoralized when things become difficult or confusing.

It is hard to believe that two years have passed since the most recent in-person Critical Care Congress in Orlando, Florida. As critical care professionals, we have endured this pandemic with grace and resilience, witnessing the suffering not only of our patients and their families, but also of our colleagues, friends, families, and sometimes ourselves. The COVID-19 pandemic has left healthcare professionals beyond mentally fatigued, and many are leaving the profession as a result. For some, “A mal tiempo, buena cara” may no longer hold true in these trying times.

Past issues of Critical Connections have addressed the COVID-19 pandemic from various perspectives, so it should be appropriate that after two years we address the emotional burden healthcare professionals are facing and explore the solutions needed to support and retain them. I am pleased to present to you the Spring 2022 Issue of Critical Connections, dedicated to burnout and COVID-19.

Society of Critical Care Medicine (SCCM) President Sandra L. Kane-Gill, PharmD, MSc, FCCP, FCCM, commences this issue by highlighting the risk critical care medicine professionals face, how it affects the team as a whole, and consequently affects team dynamics. She offers strategies to address burnout as a collective team effort.

SCCM’s webcast series also addressed this issue. Hosted by SCCM and American Association of Critical-Care Nurses (AACN), “Best Practices for Managing Staff Shortages” presents the interesting story of Nancy Blake, PhD, RN, CCRN-K, NHDP-BC, NEA-BC, FAONL, FAAN, CNO, at LAC+ and USC Medical Center, with a multidisciplinary panel of experts. They examine how burnout affects staffing in overwhelmed healthcare systems and how they were able to manage staff shortages. “Managing Moral Distress,” moderated by Joshua Kayser, MD, MPH, MBE, FCCM, addresses the impact of moral distress in healthcare professionals through an expert panel discussing three case scenarios. I encourage you to watch both webcasts at covid19.sccm.org/webcast.

On a more personal note, I was touched by the article “More Than a Helping Hand,” by Carissa Quinn, DNP, APRN, ACCNS. She describes how being labeled a hero became a source of distress and how it presented new opportunities for resilience. I have already asked my ICU team to read the three articles suggested by Andrea Sikora, PharmD, BCCCP, MSCR, FCCM, in “Best Practices for Mentorship and Burnout Mitigation,” which were discussed during the 2022 Critical Care Congress session “Year in Review: In-Training.” In “Creating Healthy Work Environments Through Effective ICU Liberation Bundle Implementation,” Laura Maples, MSN, RN, CCRN-K, and Anita Reddy, MD, MBA, FCCM, exemplify how the combination of AACN standards for healthy work environment and the ICU Liberation Bundle promotes multiprofessional collaboration in addition to improving patient outcomes.

After two years of pandemic, we are so ready for the renewal that spring represents. My hope is that reading this issue will provide tools that will inspire you to find a way to get you and your team back on track, remind you why you do what you do, or do as I like to say, “En buen y mal tiempo, buena cara.”
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Team Dynamic Affects More Than Performance Measures

Collective Mental Health and Burnout

In the intensive care unit, the team consists of a group of specialty-trained clinicians who work collaboratively on shared tasks with a common goal centered on patient care. Because of this close working relationship and dependence on one another, burnout that affects one individual can affect the entire team. While it is important to understand burnout for individual professions, it is equally important to understand how the change in team dynamic contributes to increased burnout rates among critical care clinicians.

Functioning as highly effective partners in healthcare requires communication and dependability. Communication can be compromised when team members demonstrate symptoms of burnout, such as ineffectively completing tasks due to lack of interest. Fellow team members need to take on incomplete tasks, which then adds to the workload of someone who did not have burnout but who may feel chronic stress if the increased workload is sustained. The lack of desire for engagement by an individual who is experiencing burnout also affects communication of patient care goals, which is a foundational component of the team—working toward a common goal. A team member feeling burnt out may be more easily agitated, leading to conflict with peers, which interferes with communication and negatively impacts team members involved in the conflict.

Another symptom of burnout is absenteeism, which may spur resentment from coworkers who depend on their team member to function. The lack of communication and dependability influences the team’s productivity and can result in a deleterious impact on patient care. Burnout in one team member interferes with team interactions and spreads burnout to other team members. There is an opportunity to further investigate burnout as a multidimensional, complex system that moves from an individual to the team.

In a study of critical care team members, 20% to 60% described moderate to high burnout and 40% conveyed feeling of moderate to high emotional exhaustion. It is curious that, in a systematic review comparing studies across different institutions, risk factors for burnout varied, indicating that burnout may be dependent on personal, environmental, leadership, cultural, and patient factors unique to an institution. In contrast, reasons reported for burnout were similar among critical care pro-

 chronic, uncontrolled stress in the workplace results in burnout, which seems more prevalent today than ever before due to sustained and unrelenting pressures of the pandemic, such as the illnesses of colleagues, friends, and family; longer work hours; increased patient volume; disruptions in home life routines, and increased workload demands brought on by staffing shortages. According to a report from the U.S. Department of Health and Human Services, one-quarter of 5000 hospitals report critical staffing shortages. Staffing shortages and burnout have a circular relationship since more burnout results in more staffing shortages when healthcare workers leave the profession. Whatever the reasons for the rise in burnout, critical care clinicians are at a heightened risk.

Most studies of burnout have quantified burnout in individual professions rather than in the critical care team as a whole. Table 1 lists burnout rates by profession. Reports measuring burnout rates for all members of the critical care team, such as dietitians and physical therapists, are sparse. It is remarkable that every member of the critical care team is reporting burnout at significant rates.

Table 1. Prevalence of Burnout for the Multiprofessional Team

<table>
<thead>
<tr>
<th>Profession</th>
<th>Clinicians reporting burnout (%)</th>
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<tbody>
<tr>
<td>Advanced practitioners⁴</td>
<td>56-61</td>
</tr>
<tr>
<td>Pharmacists⁵,⁶</td>
<td>61-64</td>
</tr>
<tr>
<td>Physicians⁷</td>
<td>45-50</td>
</tr>
<tr>
<td>Nurses⁸</td>
<td>76</td>
</tr>
<tr>
<td>Respiratory therapists⁸</td>
<td>79 (10% severe, 32% moderate, 37% mild)</td>
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Sandra L. Kane-Gill, PharmD, MSc, FCCP, FCCM, is a tenured professor of pharmacy and therapeutics at the University of Pittsburgh School of Pharmacy. She has secondary appointments in the School of Medicine, Clinical Translational Science Institute, Department of Critical Care Medicine, and Department of Biomedical Informatics. In addition to her academic appointments, Dr. Kane-Gill is a critical care medication safety pharmacist in the Department of Pharmacy at UPMC.

@SCCMPresident

Critical Connections / SPRING 2022
fessionals in a multicenter mixed-methods study of three hospitals in the same region.\textsuperscript{36} Importantly, team members observed that burnout spread within and between professions in their institutions, demonstrating that individuals’ emotional states may have an effect on the team.\textsuperscript{30}

Realizing that team dynamics affect more than performance measures, since it is also associated with collective mental health and stress, leads us to consider what can be done to overcome the negative impact of burnout on the team. Recognizing symptoms of burnout in team members can help colleagues react with support and compassion. Awareness also means recognizing burnout in oneself and seeking help before it harms the whole team. A collective team effort for tackling burnout consisting of intentional strategies for culture change and shared workload management\textsuperscript{32} also provides the team with a common goal, stimulating unity. Another approach is to seek organizational change by advocating for one another to ensure the availability of resources to manage burnout.

Overall, burnout exacts a toll on individual and collective mental health and stress. Strategies to overcome burnout should be addressed in a similar manner, with approaches for both the individual and the team. To be true partners in healthcare, we should find ways to support one another. Burnout is similar to a virus that is spreading and creating uncertainty, but solidarity can help the critical care team prevail.

Creative Community
Diversity in Age

<table>
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<th>Age Group</th>
<th>Percentage</th>
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<tr>
<td>20 &amp; Younger</td>
<td>1.5%</td>
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<tr>
<td>20-30 YEARS</td>
<td>6%</td>
</tr>
<tr>
<td>31-40 YEARS</td>
<td>31%</td>
</tr>
<tr>
<td>41-50 YEARS</td>
<td>24%</td>
</tr>
<tr>
<td>51-60 YEARS</td>
<td>18%</td>
</tr>
<tr>
<td>61-70 YEARS</td>
<td>15%</td>
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<tr>
<td>71-80 YEARS</td>
<td>4.5%</td>
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<tr>
<td>OVER 80 YEARS</td>
<td>1%</td>
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This chart is revised from a previous version that ran in the Winter 2022 Critical Connections.
Clinical Spotlight: Burnout and COVID-19

Staff Shortages and Burnout

The sun was shining as Nancy Blake, PhD, RN, CCRN-K, NHDP-BC, NEA-BC, FAONL, FAAN, stood outside Harbor UCLA Medical Center in December 2020, a stark contrast to the reality just inside the building, where a surge of patients with COVID-19 overflowed the intensive care unit (ICU) and spread into the emergency department. Los Angeles Country—the most populous county in the United States—had no available ICU beds.

Dr. Blake, the center’s chief nursing officer, was standing outside for an interview with CNN. Members of the nursing team, like many healthcare professionals, had been dealing with COVID-19 for 10 months, and Dr. Blake’s goal was to deliver a message on behalf of her team: They were tired. “It’s a disaster right now for our staff,” Dr. Blake told CNN’s Sara Sidner. “Their patients are dying. There are no family members [allowed in patient rooms], so they’re holding that patient’s hand or they’re on the other side of an iPad where the family is crying. “I am a glass half-full kind of person. My glass is empty right now.”

Dr. Blake recounted that interview recently during the webcast Best Practices for Managing Staff Shortages, hosted by the Society of Critical Care Medicine (SCCM) and the American Association of Critical-Care Nurses. A multiprofessional panel of experts discussed how staffing challenges arise in overwhelmed healthcare systems and how they have managed staff shortages.

The panel included Dr. Blake, who is now the chief nursing officer at LAC+ and USC Medical Center, in addition to:

- Kim Bennion, MsHS, RRT, CHC, system respiratory care clinical services administrative director at Intermountain Healthcare in Salt Lake City, Utah, USA
- Patricia R. Louzon, PharmD, BCPS, BCCCP, FCCM, pharmacy clinical manager of critical care and the emergency department at Advent-Health Orlando in Orlando, Florida, USA
- Vinay Maheshwari, MD, MHCDS, FCCP, FACP, chair of the Department of Medicine at Christiana Care Health System in Newark, Delaware, USA

The webcast was moderated by Maureen Seckel, MSN, APRN, ACNS-BC, CCNS, CCRN, FCNS, FCCM, medicine/critical care clinical nurse specialist and sepsis coordinator at Christiana Care Health System in Newark, Delaware, USA.

Burnout Contributes to Staff Shortages

In August and September 2021, the American Nurses Foundation conducted a survey of nearly 10,000 nurses from across the United States about their mental health and wellness. Fifty percent of respondents said that they intended to leave or may leave their position within the next six months. Their intent to leave was driven by mental health, staffing, and organizational issues. The survey also found that
self-reported burnout had increased by 350% since a similar survey was conducted in June and July 2020. This increase in fatigue and staff shortages is occurring at the same time that many healthcare systems face increased workloads as they try to catch up on previously postponed procedures from earlier in the pandemic.

"It's much different this time around than earlier in the pandemic," Dr. Maheshwari said. "The first time around, there was a willingness for everyone to jump into the fray, and there was also a de-escalation of services globally that allowed for redeployed staff from other areas. This time around, however, surgeries still are very active, procedures are very active, and there's a large number of patients that didn't seek care for quite a bit of time and are coming into our hospital setting. It makes it really challenging for us at the moment to reallocate staff from other areas. A lot of what we've had to do is rely on the same staff who have been burdened and fatigued and stressed."

Dr. Maheshwari and the other panelists also spoke about staff members leaving to become travel nurses who can work on short-term contracts and make far more than an average full-time nurse. The average salary for a registered nurse in Illinois in 2021 was $80,000. Traveling nurses were being offered salaries of up to $8,000 per week during the surge in the summer of 2021 attributed to the delta variant.

Responses to Staffing Shortages
Ms. Bennion said that her healthcare system could not offer the salaries available to travel nurses or respiratory therapists. She also pointed out that bringing in traveling nurses and respiratory therapists presented additional challenges such as training them on operations and practices used in the healthcare system. She and her colleagues created a hybrid position. Intermountain Healthcare began offering six-month per diem positions targeted to nurses and therapists who lived near the system's Utah-based hospitals. "We've tried to target those who live in our community, who have children, and who really don't want to uproot those children to work traveling positions," she said. "That's brought several out of retirement and back to the workforce."

Dr. Louzon said that pharmacists have not faced the same type of pressure with traveling positions, but she has still seen a number of pharmacists leaving their roles at hospitals for industry positions that are more flexible or do not require a bedside care component. To try to minimize these departures, Dr. Louzon said it is valuable to emphasize professional growth opportunities for those who are considering a new career path. "We try to focus on the long-term aspect and benefits of staying with one institution and also the benefits of being able to teach and conduct research," Dr. Louzon said. "Those opportunities are a little harder to find in more transient or industry-type positions."

Dr. Maheshwari agreed that trying to get employees to look at the long term is a good tactic, but he believes that approach is not as effective as it once was. "Some of our staff are of a different generation in which they're okay with being transient for a period of time in their life," he said, "which is perhaps different than what we would have experienced 10 or 15 years ago when people were more comfortable..."
planting roots.” For those employees, Dr. Maheshwari said that senior leadership and human resources need to brainstorm different types of benefit packages that could be more enticing to those employees. Instead of lavish retirement packages, for example, Dr. Maheshwari thought that more scheduling flexibility, virtual care opportunities, or the ability to work from home might carry more weight and keep more employees in place and satisfied.

“The pandemic is helping us better understand the talent that we have in the critical care community across all the different disciplines. But it has also underlined how hard it’s been to be a critical care professional overall, not just during the pandemic,” he said. “It’s unearthed a lot of the cracks and crevices we’ve had in place for quite some time, and I think it’s going to put us in a better place to help address them for our long-term future.”

In January 2022, the American Nurses Association, American Association of Critical-Care Nurses, American Organization for Nursing Leadership, Healthcare Financial Management Association, and the Institute for Healthcare Improvement launched a nursing staffing think tank to find solutions to the nursing staffing shortage.

Watch the webcast at sccm.org/staffshortages.

MANAGING MORAL DISTRESS DURING A PANDEMIC

In 1984, moral distress was defined as the psychological distress of being constrained from acting on what is known to be right. The impact of moral distress on healthcare professionals has been in the spotlight as a result of the ongoing COVID-19 pandemic. To help understand what moral distress looks like and how to manage and prevent it, the Society of Critical Care Medicine recently hosted the webcast “Managing Moral Distress During a Pandemic.”

The webcast was moderated by Joshua Kayser, MD, MPH, MBE, FCCM, professor of clinical medicine and medical ethics at the University of Pennsylvania Perelman School of Medicine and section chief of medical critical care and the medical ICU director at the Corporal Michael J. Crescenz Veterans Affairs Medical Center in Philadelphia. Dr. Kayser moderated a panel comprising these faculty:

- Connie M. Ulrich, PhD, MSN, RN, FAAN, Lillian S. Brunner Endowed Chair in Medical and Surgical Nursing, professor of nursing, and professor of medical ethics and health policy at University of Pennsylvania School of Nursing
- K. Sarah Hoehn, MD, MBe, director of pediatric supportive care and comfort team, codirector of ethics consultation service for the MacLean Center for Clinical Medical Ethics at the University of Chicago, and associate professor of pediatrics at the University of Chicago Comer Children’s Hospital

To structure the conversation, Dr. Kayser provided the following three cases for Drs. Ulrich and Hoehn to discuss.

Case 1

A 35-year-old man is admitted with COVID-19 pneumonia and acute respiratory distress syndrome. He has refractory hypoxic respiratory failure despite optimized ventilator settings, heavy sedation, neuromuscular blocking agents, inhaled nitric oxide, and pronation. Venovenous extracorporeal membrane oxygenation (ECMO) is initiated. Six weeks later he remains ECMO dependent without evidence of lung recovery. He is now in multiorgan failure on numerous vasoactive medications, with progressive renal failure. Multiple healthcare team members have expressed frustration over family requests for continued care. On rounds, one team member remarks, “Why are we doing this to him? There’s no hope of him getting better. This is torture.”

This is a clear example of a situation causing moral distress, Dr. Hoehn explained. She pinpointed a single word—torture—that is cause for concern. “You feel like you are an active participant in an ongoing injury to the patient and their well-being,” she said of moral distress. “That really gets to people at their core. It goes against when we say, ‘First do no harm.’ The whole concept of moral distress comes from people who feel like they’re violating that.”

Moral distress is exhibited by more than just words. A person may cry, withdraw from a situation, or battle with feelings of powerlessness, exhaustion, shame, or guilt. Some people may confuse moral distress with psychological or emotional distress. While there are some similarities, it is moral distress that often is the catalyst for the other two, Dr. Ulrich said. “There’s a sense that there is an erosion of your self-respect, or your self-esteem, or your sense of your moral values, or your personhood, or a sense of your moral integrity,” she said. “[Moral distress] is different because it’s more damaging to who you are as a person because of the violation of your moral core.”

Dr. Hoehn offered a simple first step for those who feel they may be suffering from moral distress: Change your perspective. If you are focused on how tortuous treatment is for a patient, view the scenario from the patient’s perspective. Consider whether there is anything you as a healthcare professional can do to make the experience less tortuous, such as adjusting the dosage of a pain medication or perhaps something as simple as playing the patient’s favorite music on a speaker in the patient’s room. The act does not need to be grand or heroic—a simple step can go a long way toward how you view the situation, as well as how the patient feels. Ultimately the goal is to empower the people feeling moral distress to act on it.

Case 2

A 76-year-old woman with relapsed refractory multiple myeloma is transferred from the oncology service to the ICU with neutropenic septic shock and acute-on-chronic renal failure. She is volume resuscitated and initiated on broad-spectrum empiric antimicrobial coverage. Two vasoactive medications are initiated for persistent shock. An oncology consultation confirms that no chemotherapeutic options remain for her. Healthcare team members meet with the family to discuss her goals of care. Despite informing the family of her grave prognosis and recommending against cardiopulmonary resuscitation, the family requests that “everything” be done to rescue her. It is suspected that she will require renal replacement therapy in the next 24 hours and her in-hospital predicted mortality exceeds 90%. Three days later, she remains critically ill with refractory shock. Because of the differing opinions about her management, the family becomes suspicious of the healthcare team’s
motivations, accusing them of not doing enough and “wanting her to die.” Healthcare team members are avoiding family members and are frustrated by the lack of transition to a comfort-oriented focus of care for the patient.

Dr. Ulrich was quick to point out that avoiding a patient or family member in an attempt to avoid conflict can ultimately create more conflict and lead to a heightened sense of moral distress. While the healthcare professional’s frustration may feel warranted, it is important to view the situation from others’ perspectives, in this case, the family members.

Dr. Hoehn added that this case demonstrates the power of words and truly how impactful words can be in tense situations. For example, saying you will do everything you can to help the patient is different from saying you will do everything you can to help the patient without harming the patient. Instead of simply recommending against cardiopulmonary resuscitation, this healthcare team needed to explain why they were making the recommendation and specify how cardiopulmonary resuscitation would cause undue harm to the patient. Empathy for the patient can soften the conflict and reduce the moral distress felt by both the healthcare professional and the family members.

Words can also lead to distrust, for example, when family members talk to team members who are unaware of the most recent patient care instructions. When different team members tell the family different things or use different terminology, family members begin to question whether the care team is cohesive and whether they can be trusted. When healthcare professionals feel as if their patients do not trust them, their moral distress increases.

Case 3
It is month 21 of the COVID-19 pandemic. An ICU team member known for his good humor, kind demeanor, and compassionate bedside care has recently started arriving late to work. He is disheveled and seems easily annoyed by routine patient care. He is notably more forgetful than in the past and has developed a short temper when asked questions about patient follow-up. He often complains of being exhausted and seems easily distracted. On more than one occasion, team members have heard him voice frustration over visitation policies, lack of adequate resources, and being “forced to care for unvaccinated critically ill COVID patients.”

Dr. Ulrich explained that this ICU team member has a clear case of moral distress and burnout. More data are needed, but Dr. Ulrich hypothesized that moral distress leads to burnout, and burnout ultimately leads many to leave the profession. In August and September 2021, the American Nurses Foundation conducted a survey of nearly 10,000 nurses from across the United States about their mental health and wellness. Fifty percent of respondents said that they intended to leave or may leave their position within the next six months. “We need to urgently identify institutional strategies that can assist individuals,” Dr. Ulrich said.

Dr. Hoehn pointed out that, while it is great that many health systems offer employee assistance programs, there are often concrete logistic hurdles preventing healthcare professionals from getting the care they need. For example, if a clinician needs to call the program, where can they call from? They can’t do it in the ICU, they can’t take over a patient room, and they certainly can’t make the call in a public lobby. The onus should be on administrators to understand what resources are needed for employees to function, work, and cope with life. “We don’t prioritize mental health in the way we prioritize physical health,” she said. “When [employees] walk out of a hospital today, they’re feeling drained and not necessarily feeling valued.

From an administrative and institutional perspective, people really need to think about how to make that person leaving after a horrible 12-hour shift feel valued. What did you do for them today that [makes] them want to come back to work?”

Watch the webcast at sccm.org/moraldistress.
Clinical Spotlight: Burnout and COVID-19

More Than a Helping Hand
A nurse’s perspective on the rapidly changing landscape of the COVID-19 pandemic

Carissa Quinn, DNP, APRN, ACCNS, hates being called a hero. She doesn’t mind the title, she just dislikes the perception that comes with it. At the onset of the COVID-19 pandemic, she appreciated the adulation. Dr. Quinn was a critical care clinical nurse specialist (CNS) at Advocate Illinois Masonic Medical Center in Chicago, and she enjoyed all the shows of gratitude and the nightly banging of pots and pans to salute frontline healthcare workers. As the pandemic wore on, the praise became a mixed blessing.

“The hero treatment created a sense that working in healthcare meant we were expected to be superhuman,” said Dr. Quinn, who today is a CNS at Mayo Clinic in Rochester, Minnesota. “We were expected to carry the burden and take whatever was coming our way, potentially sacrificing our health and safety as well as the health and safety of our loved ones. Being hailed as a hero was unsettling for many of us, and eventually it became a source of distress.”

Nearly one in five healthcare workers quit their jobs since the start of the pandemic. More than half of nurses are considering leaving their positions within the next six months. The hero treatment is not necessarily to blame for the mass exodus, but Dr. Quinn believes it has not helped either. It is no secret to her why so many of her colleagues are leaving. They are tired. She is tired too. “We entered this profession to help people who need our skills and expertise,” she said, “but we’re human, and this pandemic is taking a toll.”

For as far back as she can remember, Dr. Quinn wanted to be helpful. As a girl, she was at her father’s side, offering assistance for tasks around the house, such as fixing a door hinge, building a doghouse, or laying tile in the kitchen. She spent countless hours holding flashlights, using a stud finder, sanding, and occasionally swinging a hammer. “I loved being useful,” she said. The same was true whenever she saw someone in pain. “If someone got hurt, I wanted to be able to do something about it,” Dr. Quinn said. “If I didn’t know what to do, I at least wanted to provide them with support or comfort in the meantime.”

Thirty years later, she still has that desire to help others. In her current role at Mayo Clinic, Dr. Quinn supports the medical intensive care unit (ICU) and helps improve nursing practice across the unit, hospital, and system. A normal day starts with her looking over the unit census in the electronic health record, learning about newly admitted patients, and following up on higher-acuity patients. She and her colleagues touch base about new patients and patients scheduled for discharge and discuss any anticipated issues for the day. She then connects with the charge nurses and checks in on the overall status of the unit.

It may sound normal, but there’s nothing normal about working in healthcare during the pandemic, she said. “Much of my time during the pandemic has been heavily focused on the care of COVID-19 patients,” Dr. Quinn said. “This has been a unique experience because of the many unknowns about the disease, from the pace of change to the lack of evidence on which to base our care. Being collaborative, flexible, and willing to adapt quickly has become paramount in facing the challenges COVID-19 presents.”

Dr. Quinn covered the ICUs and telemetry units at Advocate Illinois Masonic Medical Center when the pandemic began. “In healthcare, our decisions are typically planned, vetted, and carefully weighed before being put into place,” Dr. Quinn said. “We rely on good science and well-studied methods to drive practice. The pandemic forced us to drastically change our approach.” Early on, Dr. Quinn and her colleagues applied their knowledge about respiratory distress and respiratory failure to their care of COVID-19 patients, but it quickly became clear that COVID-19 would not play by the same rules. Change was needed.

To help with that change, Dr. Quinn turned to the Society of Critical Care Medicine (SCCM). “Once the pandemic hit Chicago and we recognized the need to make rapid changes to our practice and logistics in caring for a large influx of high-acuity patients, I looked to SCCM for guidance in implementing the needed changes,” she said. “Thanks to SCCM’s guidance for emergency expansion of critical care resources, I felt more confident that we would be able to manage the rapid change safely and efficiently.”

In the pandemic’s initial weeks, Dr. Quinn worked primarily from home because of a respiratory illness that affected her and her family. She felt guilty spending so much time at home and not being able to offer support at the hospital. Once she was able to return to the hospital, her guilt centered on the health risks to her spouse and their two children brought on by her work environment. It was a constant rollercoaster of emotions.

“It was scary and exciting, and I was

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“Thanks to SCCM’s guidance for emergency expansion of critical care resources, I felt more confident that we would be able to manage the rapid change safely and efficiently.”

— Carissa Quinn, DNP, APRN, ACCNS

+1 847 827-8869
“Driven by adrenaline and a call to action,” Dr. Quinn said. “Early on, it brought out the best in us. I remember being inspired and proud to work in healthcare while also fearing the unknown potential of the virus.”

Even after her initial quarantine, Dr. Quinn and her family went out of their way to socially distance themselves from others. Before the pandemic, she and her spouse had been considering moving away from Chicago. She had spent the previous 13 years working in and around the city, and they thought a smaller city would be a better fit for their family. The Mayo Clinic position opened just as they were weighing their options.

Dr. Quinn had worked at the Mayo Clinic as a new registered nurse more than 15 years ago. The job was also appealing for other reasons besides her familiarity with the institution. She wanted to work at an academic facility where she could focus specifically on a medical ICU population. She wanted to work in a place with a large, supportive network of CNS’s and an organization committed to excellence in practice, education, and research. The Mayo Clinic offered that and more.

“Rochester was very appealing as a safe, mid-sized city with a world-class hospital system and a job that fit my interests and experience, plus we were lucky to have family who already lived in Rochester,” Dr. Quinn said. “I really saw this opportunity as my dream job.” She and her family moved to Minnesota in the fall of 2020. The job is exactly what Dr. Quinn hoped it would be, but the realities of working in healthcare during a two-year pandemic have been taxing.

“Having to face ongoing challenges and changes with the virus and climate around the pandemic has caused a feeling of perpetual exhaustion and frustration,” she said. “It’s natural to want to throw in the towel or look for ways to move on. I think we all want to return to a sense of normalcy or move into a new normal beyond the pandemic, but working with this population every day doesn’t allow that for those of us still here.”

Dr. Quinn has watched countless colleagues leave their jobs in the past two years because of burnout and fatigue. She has considered leaving as well. She respects those who chose to leave the profession because it was right for them. She realizes that working in healthcare, even during a pandemic, is what is right for her. After all, helping others is what she has always wanted to do.

“Personally, I’ve had to be very mindful of the impact of the pandemic on my emotional and mental well-being and how it has impacted my life outside of work,” Dr. Quinn said. “I have recognized the value of being present, letting go of the desire to plan and control the future, and realized that resilience requires continuous effort. I’ve learned to accept what is happening and focus on what I can positively impact through my work.”
As burnout has become more pervasive, statistics on burnout among healthcare professionals have increased in the literature. “The healthcare profession is really facing a pandemic of burnout, and this pandemic was present even before COVID-19 came on the scene,” said Andrea Sikora, PharmD, BCCCP, MSCR, FCCM. “COVID-19 has really just served to fan those flames.”

More than 75% of healthcare professionals have self-reported burnout as well as increased frustration and feeling overwhelmed at work. More than 90% say they are stressed. Dr. Sikora, Clinical associate professor at the University of Georgia College of Pharmacy and critical care pharmacy specialist at Augusta University Medical Center, presented these statistics at the Society of Critical Care Medicine’s 2022 Critical Care Congress in April as part of the session “Year in Review: In-Training.”

Dr. Sikora explained that burnout is a syndrome with three dimensions: feelings of energy depletion or exhaustion, increased mental distance from the job or feelings of negativism or cynicism related to the job, and reduced professional efficacy. The common link among these dimensions is that they all result from chronic workplace stress that has not been successfully managed, she said. Burnout rates of greater than 50% have been reported across healthcare professions, including physicians, nurses, and pharmacists. It is no surprise that burnout is particularly rampant among critical care professionals.

“When we think about the specific intersection of burnout in critical care, we also have to bring in the unique factors of the ICU environment, [including] elements of compassion fatigue from dealing with critically ill patients, moral distress from difficult decisions that are being made in very stressful situations, and perceived delivery of inappropriate care,” she said. “On top of that, you bring in the fact that critical care is an academic discipline, so many people taking care of those patients also have teaching roles. That’s another independent factor that comes in and contributes to burnout syndrome.”

When these factors combine, critical care professionals end up facing posttraumatic stress disorder or other psychological symptoms, while patient satisfaction and quality of care delivered at the bedside decrease. “These feelings lead to increased rates of job turnover and attrition from the field,” Dr. Sikora said, “which is not only unfortunate for the individuals leaving the field after years of training, but there are also increased costs to the institution.”

What can be done? Dr. Sikora highlighted three recent articles offering recommendations on how to prevent burnout and establish effective mentorship opportunities.

**Igniting Change**

“Igniting Change: Supporting the Well-Being of Academicians Who Practice and Teach Critical Care” was published in *Critical Care Nursing Clinics of North America.* The authors explain how working as a nursing faculty member and maintaining a clinical practice as a critical care nurse can lead to unique challenges and stressors that can threaten well-being.

Several strategies can be implemented to promote well-being. It is important for individuals to take responsibility for actions that can improve their physical and mental well-being, including exercise, proper nutrition, and sufficient sleep. Because of the role the workplace plays in causing burnout, institutional components must also be addressed.
applied to any critical care profession. “One of the best things about mentorship when it’s done well is not only does it provide practical, hands-on advice, but it also provides high quality connections,” she said. “One of the most important things for preventing burnout and for feeling efficacy in the field are these feelings of connections and loyalty over time.”

The article defines mentorship as a deliberate, effortful, and evolving relationship characterized by mutual growth and shared altruism with a primary goal of the mentee’s personal and professional development. Dr. Sikora said that she appreciated the detail put into this definition and spent time breaking it down to highlight how mentorship can in fact help prevent burnout.

She focused on the words “deliberate” and “effort.” True mentorship does not result from accidental interactions such as when a person sees someone in the hallway and offers some advice. Mentorship stems from one person seeking out another and both individuals making time to meet and investing in the relationship.

The best types of mentorships provide mutual growth and shared altruism for both the mentor and mentee. A give-and-take dynamic exists between two people, and one goal is for mentors to learn and grow from their mentees; not only mentees benefit from the collaboration. “What you’re doing in this dynamic is trying to do what’s best for the other,” Dr. Sikora said. “It’s important to realize the primary goal is the personal and professional development of the mentee, but it’s important to realize mentors are taking just as much from this relationship at times as the mentee is.”

**Gender Inequity**

Dr. Sikora said she chose “Gender Inequity and Sexual Harassment in the Pharmacy Profession: Evidence and Call to Action,” published in *American Journal of Health-System Pharmacy*, because it is action oriented. The authors acknowledge the lack of gender equity in leadership and recommend that processes be created to support female membership by offering diverse mentorship opportunities.

“Mentorship, although it can have these touchy-feely words like mutual growth and shared altruism, has extremely practical benefits,” Dr. Sikora said. “Numbers are very supportive of the fact that having a mentor makes you more likely to get a promotion you want, to be given awards and titles that you’re interested in, and results in higher salary and pay overall. It also decreases turnover and increases feelings of satisfaction and personal well-being.”

The article offers a view of mentorship based on the healthcare ethics principles of autonomy, beneficence, nonmaleficence, honesty, and justice. Autonomy can refer to the right of the mentee to function independently and successfully. Beneficence is the obligation to do good, with the overall goal being the mentee’s personal and professional success. Nonmaleficence is the obligation to not harm others, a key aspect of any effective mentorship. Honesty means that both participants in a mentorship should be truthful and authentically reflect and provide feedback, which are necessary for mutual growth. Justice is the principle of fair and equitable treatment of others.

The article also suggested best practices to support each of these ethical principles. Dr. Sikora said that this article “shows that what you put into a mentoring relationship is likely what you’re going to get back out. I think that’s really powerful to realize.”

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**Kindling the Fire**

“Kindling the Fire: The Power of Mentorship” was published in *American Journal of Health-System Pharmacy*. The authors focus on mentorship within the pharmacy profession, but Dr. Sikora said that the overall concepts can be
The COVID-19 pandemic amplified healthcare worker burnout globally, with unprecedented workloads, surging patient census, and the impact of death and grief rather than patient recovery. Healthcare professionals also must battle constant misinformation at work and at home while trying to maintain personal safety and health. Approximately one-third of surveyed healthcare workers report severe burnout.1

Despite these challenges, clinicians strive to stay engaged and emphasize the human side of their work, going back to the basics of training—treating patients and families as individual people and connecting with them on a personal level. The American Association of Critical-Care Nurses (AACN) standards for a healthy work environment (HWE) and the Society of Critical Care Medicine (SCCM) ICU Liberation Bundle (A-F) provide guidelines to improve outcomes for both caregivers and their patients. When used in tandem, they alleviate burnout through their combined synergistic effect of improving patient outcomes while achieving staff satisfaction and promoting multiprofessional collaboration.

Each element of the ICU Liberation Bundle relates to the AACN HWE Standards. Anita Reddy, MD, MBA, FCCM, provides practical examples of how Cleveland Clinic’s 64-bed medical intensive care unit (ICU) implemented the elements of the ICU Liberation Bundle to not only help strengthen clinicians’ relationships with patients but also to improve their own satisfaction and well-being.
AACN’s HWE Standards

- Skilled Communication: Be as proficient in communication skills as you are in clinical skills.
- True Collaboration: Be relentless in pursuing and fostering true collaboration.
- Effective Decision-Making: Be committed partners in making policy, directing, and evaluating clinical care and leading organizational operations.
- Appropriate Staffing: Ensure the effective match between patient needs and clinician competencies.
- Meaningful Recognition: Be recognized and recognize others for the value each brings to the work of the organization.
- Authentic Leadership: Fully embrace the imperative of an HWE, authentically live it and engage others in its achievement.

SCCM’s ICU Liberation Bundle

A Element: Assess and Manage Pain

Optimizing pain management and relief to prevent chronic pain requires skilled communication and effective decision-making by all involved.

- The multimodal analgesic approach incorporates true collaboration of the multidisciplinary team, consisting of consulting between the physician who orders the medications; the pharmacist who monitors and dispenses it; the nurse who assess pain, administers the medication, and observes for effects; and the family who helps healthcare professionals understand the patient’s pain.

B Element: Both Spontaneous Awakening Trials (SATs) and Spontaneous Breathing Trials (SBTs)

Skilled communication and true collaboration among caregivers are essential for both SATs and SBTs because they are performed in conjunction with one other.

- The nurses, respiratory therapists, pharmacists, advanced practice providers, and physicians should each know the patient’s eligibility and the timing of the SAT and SBT. Effective decision-making becomes crucial in determining interventions when a patient passes the SAT but may or may not pass the SBT.

C Element: Choice of Analgesia and Sedation

Appropriate analgosedation requires effective decision-making to determine the best approach to meet the patient’s needs. Healthcare professionals must consultatively choose between analgesia-first sedation, which incorporates an analgesic before a sedative to reach the sedation goal, or analgesia-based sedation, which uses an analgesic instead of a sedative to reach the sedation goal.

In critically ill adults who require sedation, it is recommended to maintain a light level of sedation (Richmond Agitation-Sedation Scale score –2 to 0, Riker Sedation-Agitation Scale score 3 to 4) rather than deep sedation because light sedation is associated with shorter time to extubation.

D Element: Delirium, Assess and Manage

Delirium can be defined by cognitive and behavioral disturbances, agitation, and restlessness as hyperactive or by memory impairment, somnolence, and listlessness as hypoactive.

Evidence reveals an association of delirium with duration of mechanical ventilation, ICU and hospital length of stay, costs, mortality, and long-term cognitive impairment, yet its prevalence is underrecognized 70% of the time.

Authentic leadership recognizes both forms of delirium as indicators for appropriate staffing. Adequate staffing provides improved assessment of oversedation in the hypoactive delirium patient while providing time and attention to manage the hyperactive delirium patient.

"One delirium reduction intervention successfully implemented in the Cleveland Clinic’s 64-bed medical ICU was to create quiet hours during the day from approximately 2 to 4 p.m. This time was set aside so the patient can rest uninterrupted and reduce stimulation during part of the day. The lights are turned down in the unit, all are encouraged to use quiet voices, and consultative services are minimized as much as possible," said Dr. Reddy.

E Element: Early Mobility and Exercise

Achieving early mobility incorporates every standard of the HWE. True collaboration between members of the lift team, occupational therapists, physical therapists, respiratory therapists, and nurses incorporates effective decision-making and skilled communication to coordinate movements and transfers. An organization’s authentic leadership ensures appropriate staffing as a cost-effective measure and as meaningful recognition of the multidisciplinary team’s endeavors to shift the daily practice of the frontline caregiver and the interprofessional team.
“The Cleveland Clinic is fortunate to have facilities designed specifically for patient respite,” said Dr. Reddy. “The cardiac building has a rooftop space that offers exceptional views of the Cleveland skyline. Occasionally, stable patients undergoing extended ICU hospitalization are taken to the rooftop for a breath of fresh air and the amazing view. Physicians, nurses, respiratory therapists, and physical therapists take this opportunity to provide these weak patients mobilization into a chair and focus on core strength. These field trips provide both bonding with patients and team fulfillment (Figure 2).”

**F Element: Family Engagement and Empowerment**

Family engagement relies on the meaningful recognition of family members as integral to patient outcomes. Skilled communication helps family members make sense of the critical care crisis. Sensemaking protects the family’s mental health and physiologic reserve. Welcoming their presence and role-modeling caring behaviors teaches family members how to be caregivers, especially for patients who may have lengthy recoveries. Finding out what matters to patients and their families helps the healthcare team humanize the patient’s ICU experience, which in turn helps reduce moral distress and maximize staff well-being.

“The Cleveland Clinic recently offered follow-up care to patients discharged from the ICU in its post-ICU recovery clinic. Outpatient clinic visits address challenges of physical and cognitive deficits faced by patients who have survived a long ICU stay by ensuring follow-up care in a multidisciplinary manner. This includes visits with pharmacists, psychiatrists, physical and occupational therapists, and respiratory therapists, providing yet another opportunity to interact with patients and families, observe their improvement over time, and hear about their accomplishments since ICU discharge,” said Dr. Reddy.

The importance of alleviating healthcare professional burnout during the pandemic is paramount. Implementing the ICU Liberation Bundle elements alongside the HWE standards can fortify caregiver resilience with positive patient outcomes to mitigate caregiver burnout. In an HWE, skilled communication is used to share information for effective decision-making. Authentic leadership meaningfully recognizes healthcare professionals’ contributions and burdens by ensuring adequate staffing. The presence of pharmacists, respiratory therapists, and mobility teams are synchronized during daily rounds to promote true collaboration in the shared goals of patient care to decrease caregiver distress.

It is up to healthcare professionals to emphasize the evidence that HWEs have a direct impact on quality of patient care and caregiver morale. Professional burnout symptoms of mental exhaustion, disconnect, and lack of personal accomplishment diminish when healthcare professionals create HWEs where safety becomes the norm and excellence the goal. The ICU liberation Bundle offers a road map to connect the daily work at the bedside with the ultimate aspiration of helping people get back a meaningful life. And an HWE supports effective ICU Liberation Bundle implementation while promoting caregiver satisfaction, well-being, and resilience.

“One of the most fulfilling parts of working in the ICU as a physician is to be able to interact with patients in a meaningful way and know more about them on a personal level,” said Dr. Reddy. “Often this means using the least amount of sedation possible, making every effort to liberate them from mechanical ventilation, preventing delirium, engaging the patient and family, and helping them get closer to their baseline level of functioning. We have been able to use tools such as the “About me” boards and mobility field trips to encourage these aspects of the ICU Liberation Bundle and bring camaraderie to physician-patient relationships. These real and personal interactions are what make me feel refreshed and alive as a physician in the ICU.”

Laura Maples MSN, RN, CCRN-K, is a member of the SCCM ICU Liberation Committee and the Northern California Chapter. She has worked in critical care and quality oversight for over 30 years with over a decade of telecritical care experience. She works with Kaiser Permanente’s Northern California Regional Quality and Data Analytics Department in Oakland, California. Inspired by evidence-based practice and research, she is dedicated to the health and healing of others to ensure their best outcomes and quality of life.

Anita Reddy, MD, MBA, FCCM, is the associate director of ICU Operations, cochair of the Laboratory Stewardship Committee, president of the medical staff and a member of the Board of Governors at Cleveland Clinic in Cleveland, Ohio. Dr. Reddy is also chair of SCCM’s Quality and Patient Safety Committee, cochair of the SCCM Choosing Wisely Knowledge Education Group, and a member of the ICU Liberation Committee.
Ionized Magnesium (Mg++)
A Critical Piece of the Electrolyte Puzzle

Electrolytes (Na⁺; K⁺; Ca++; Cl⁻) are all measured as ions because that is their only clinically active form. Now Mg++ can be measured the same way.

Ionized Magnesium (Mg++), not Total Magnesium (tMg), is the only physiologically active form of magnesium. Magnesium bound to protein, or chelated to phosphate, citrate, sulfate, or carbonate is inactive.

tMg is an unreliable substitute for Mg++. Mg++ may be abnormal while tMg is normal, and vice versa.¹ ²

Mg++ and Ca++ can now be measured in the lab or at the point of care to provide a complete electrolyte analysis: Na⁺; K⁺; Ca++; Mg++; Cl⁻; HCO³⁻;

If you are measuring K⁺ and Ca++; you should also be measuring Mg++

Mg++; Ca++; and K⁺ ion abnormalities are common in critical care medicine.

Mg++; Ca++; and K⁺ ions are interdependent and play a role in numerous disease processes, including diabetes, hypertension, kidney disease, cardiovascular disease, cardiac arrhythmia, and sepsis.

Mg++ is a vasodilator, Ca++; is a vasoconstrictor. Both are synergistic in maintaining vascular and bronchial smooth muscle tone.

Mg++ ion is an antagonist to Ca++ ion entry into cardiomyocytes.³

Serial monitoring of Mg++; Ca++; and K⁺ ions are all important in correcting or avoiding cardiac arrhythmias and cardiomyocyte necrosis.⁴ ⁵ ⁶

Hypokalemia may be unresponsive to potassium repletion unless hypomagnesemia is first corrected.⁷

References:
The Unique Value of Tele-ICU in Unburdening Bedside Staff

Tele-ICU has expanded considerably since the onset of the COVID-19 pandemic when the need for quick access to the most up-to-date information became imperative. Two benefits of the remote delivery of healthcare services are the ability to grow and flexible access to advanced knowledge and care.

Even before the pandemic, U.S. healthcare systems risked an insufficient number of ICU beds. The surge in demand for beds during the pandemic accelerated the need for care delivery. There is now clear evidence that our health systems cannot cope with the influx of patients that occurred during the pandemic. Staff shortages have continued even after the waves of COVID-19 patients have subsided, causing burnout in critical care professionals. Care team members are retiring from the profession, transitioning to nonclinical settings, or choosing nontraditional work arrangements, exacerbating the pressure on the remaining workforce.

Few strategies are available for addressing staffing issues, and these strategies are primarily based on building resilience or providing temporary replacements with travelers and locum staff. Some hospitals are relying heavily on travelerers or locum staff for a short-term solution, but long-term solutions must be found. More effective strategies focus on providing relief to the remaining workforce and increasing effectiveness by simplifying healthcare delivery workflow. Another solution is reallocating healthcare delivery to remote tele-critical care (TCC) services. After the appropriate IT infrastructure is in place, certain services are assigned to offsite clinicians who are physically located in almost any location, allowing access to specialists who focus on evidence-based and highly protocolized care and are flexible in delivering that care. In addition, the TCC footprint is rapidly adjustable, allowing flexibility in addressing the patient’s needs. Rapid and low-cost deployment is enhanced by the use of mobile technology such as smartphones and tablets.

TCC can unburden bedside staff if some of the critical needs can be identified and shifted to the TCC team. The use of multiprofessional TCC teams comprising intensivists, nurses, respiratory therapists, pharmacists, and others to help on-site clinicians allows multiple patients to benefit from the expertise and knowledge of the TCC team and allows the on-site intensivist to focus on patients with the most need.

Other clinicians can be similarly empowered with the TCC model. At the University of Pennsylvania, we transferred several respiratory therapy (RT) services to tele-critical care respiratory therapy (eRT) services located in a remote center. These remote RTs delivered 37,000 services, including checking compliance with spontaneous breathing trials (SBTs), spontaneous awakening trials (SATs), and pulmonary bundles for patients with acute respiratory distress syndrome and intervening in several critical situations. These remote services benefitted bedside clinicians by reducing their documentation load and allowed them to focus on clinical tasks. Compliance with SBTs, SATs, and pulmonary bundles improved care delivery by accelerating patient recovery while avoiding complications. The service was well received by bedside staff and is being expanded as part of PENN eLERT. The stress on the tele-ICU clinicians was not more significant than it was before the pandemic. A similar system can be applied to nurses and pharmacists. Pharmacists’ expertise is particularly amenable to TCC services, allowing bedside staff to balance their workload and focus their activities on direct personal contact with patients.

The Emory eICU program rapidly expanded remote resources during the pandemic, and bedside clinicians welcomed the support. In addition to intensivist involvement in the provision of care, eICU nurses ramped up their observation and assistance to the bedside team during the surges. The eICU nurses performed visual rounds on all patients.
with COVID-19 hourly to remotely assist the bedside team and convey information about what was happening in patient rooms. They made it possible for only one nurse to have to enter a patient room by becoming cosigners for various tasks and procedures, which reduced exposure, increased the safety of in-person staff, and conserved personal protective equipment. This change in eICU nurse responsibilities was celebrated in the ICUs. Staff were grateful for the extra support during times of great stress. Staff of one ICU celebrated the eICU staff in their morning huddles, telling them what a huge difference they made.

Increases in eICU nurse and intensivist volume and workflow have led to increased stress, moral distress, and burnout similar to those of bedside clinicians. Emory’s eICU program saw a 50% increase in patient volume in the first surge, which has been sustained at a high level since then, but no extra staff were deployed. While our eICU team inherently understood that the primary burden of care fell to bedside staff, they were exposed to much larger numbers of critically ill and dying patients than before, leading to moral distress and fatigue stemming from a sense of powerlessness to help.

To reduce the risk of eICU nurse burnout, we developed a program that allows them to work from home while still providing the same level of care to patients and staff in the ICUs. Laptops, docking stations, and monitors were purchased for nurses’ homes. The nurses work in a rotation to ensure that a nurse is in the hub at all times, with one month at home and two months in the hub. The program has been well received and has helped with their stress. The eICU staff are more comfortable at home and feel less stressed. It has also helped with shift coverage when there are last-minute absences, leaving the area short of staff. We now have about 80% coverage when there is a last-minute absence, and 60% of our shifts are covered from home.

Building resilience in ICU staff is critical for their long-term well-being and leads to the provision of high-quality and reliable healthcare services. The strategies discussed here can be applied to almost all ICUs that have access to a TCC. Implementing a TCC program can be a solution for long-term staff shortages, allowing the provision of better patient care.

Krzysztof Laudanski, MD, PhD, MHIC, FCCM, is an assistant professor in the Department of Anesthesiology and Critical Care at the University of Pennsylvania and the physician lead for quality and improvement at Penn eICU at the University of Pennsylvania Health System. He is also the senior fellow at the Leonard Davis Institute of Health Economics.

Cheryl Hiddleston, RN, FCCM, is the eICU director of eICU operations at Emory University. She has been a registered nurse in Georgia for 35 years. She practiced at the bedside for 20 years with a primary focus on critical care. She also has a background in patient logistics and flow management.

Apply Now for SCCM Awards
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Celebrate the successes and achievements of critical care professionals by applying for, or nominating a peer or colleague, for an SCCM award. SCCM is looking for a diverse group of candidates. More than 20 opportunities are available to SCCM members and their teams.

Visit sccm.org/awards for a complete list. Most applications are due August 1, 2022.

Patient Safety First! Award
An ICU or program that demonstrates novel patient safety initiatives.

Grenvik Family Award for Ethics
An individual who promotes humanitarian and ethical care.

Family-Centered Care Innovation Award
A unit or program that demonstrates novel methods of providing care to patients and their families.

ICU Heroes Award
An ICU patient, family, and care team who had an exceptional experience.

Joseph and Rae Brown Award
An individual who has significantly advanced multiprofessional quality care.

Innovation in Education Award
An educator or team who demonstrates excellence and creativity.

Safar Global Partner Awards
An individual, hospital, or organization that expands the global reach of SCCM.

Norma J. Shoemaker Award for Critical Care Nursing Excellence
A nurse who demonstrates excellence in clinical practice, education, and/or administration.

Shubin-Well Master Clinician/Teacher: Excellence in Bedside Teaching Award
An individual who is a role model in teaching and ethical practice.

Barry A. Shapiro Memorial Award for Excellence in Critical Care Management
An individual who has significantly contributed to the design and/or implementation of evidence-based practice.

ICU Design Citation
A unit whose design resolved both functional and humanitarian issues.

SCCM 2022 Award Recipients
Congratulations to the 2022 SCCM award recipients! SCCM recognizes your dedication and innovation to the field of critical care and to SCCM. Watch the video of the award winners at sccm.org/awards.
SCCM Demonstrates Commitment to Diversity, Equity, and Inclusion at 2022 Critical Care Congress

The Society of Critical Care Medicine’s (SCCM) dedication to diversity, equity, and inclusion (DEI) was on full display at the 2022 Critical Care Congress. Congress featured a number of sessions that delved into DEI topics, offering attendees suggestions for providing equitable care for all patients, as well as advocating for themselves and others in the intensive care unit (ICU).

SCCM’s commitment to diversity began with its founding in 1970 with a pledge to welcome a diverse group of professionals, including physicians, nurses, pharmacists, and respiratory therapists, working to improve care of the critically ill and injured. Today, SCCM is the only organization that serves the multiprofessional critical care team. SCCM’s commitment to diversity expanded substantially in 2017 with the formation of the DEI Committee to focus on ensuring that all programs, policies, and leadership align with the lived experiences of the diverse membership, including age, ethnicity, gender, sexual orientation, gender identity, geographic location, language, and practice setting.

SCCM values and seeks diversity and inclusive practices within critical care as well as the organization. It has pledged to provide leadership and commit time and resources to promoting involvement, innovation, and expanded access to leadership opportunities. “Through these DEI sessions at the Critical Care Congress, we hope to bring awareness to the disparities that exist in today’s world with regard to race, gender, religion, ethnicity, and disabilities,” said Roshni Sreedharan, MD, FASA, FCCM, who presented in three of these sessions. “We discuss skills that audience members can use and hope to effect change by helping people recognize and respond to disparities and microaggressions. If the sessions help move the needle of equity even a little bit, that will be a win.”

Bystander, Upstander, or Ally? Strategies for Supporting DEI in the Workplace

Presenters explored the concepts of bystander (someone who is present and uninvolved), upstander (someone who speaks and acts in support of an individual or cause) and ally (someone who joins with another person or group to support that person or group), providing strategies for what this might look like in the real world, including the ICU.

The session was moderated by Hira Shafeeq, PharmD, BCPS, and featured Dr. Sreedharan, Anthony T. Gierlach, PharmD, FCCM, and Ann E. Thompson, MD, MHCPM, MCCM. In addition to bystander, upstander, and ally concepts, they discussed microaggressions, with participants...
enacting scenarios and discussing ways to respond and intervene when witnessing micro- or macroaggressions in the workplace.

**How to take Care of Your ______ Patient**

Moderated by Oveys Mansuri, MD, MBA, FACS, FCCM, this session addressed challenges faced by adult and pediatric patients of underrepresented groups, including religious, ethnic, and gender identity minority groups. Speakers included Louisdon Pierre, MD, MBA, FAAP, FCCM; Orlando Garner, MD; Sanjiv Gray, MD, FACS; and Adebayo Adeyinka, MD, FCCM.

Dr. Pierre, who is from Haiti, discussed the benefits of diversity among staff physicians, including how minority pediatric patients benefit from being treated by those who look like them with regard to improved communication and medication adherence. He talked about how to increase staff diversity through mentoring and other means and how ICUs and hospitals can provide culturally sensitive care to children. “Ultimately, effective social connections are more relevant than racial or ethnic concordance,” said Dr. Pierre. “The goal is to create greater awareness of the inequities in pediatric critical care professionals who may feel as if they are the only racial, gender, religious, or ethnic minority practicing in a critical care setting.”

Moderated by Dr. Shafeeq, the session featured presentations by Dr. Sreedharan; Michaela A. West, MD, PhD, FCCM; and Wendy R. Greene, MD, FACS, FCCM.

“We hope that members who identify as being part of a historically underrepresented group will find this session helpful in navigating upward mobility in their careers,” said Dr. Shafeeq. “We want to empower our members, strengthen their viewpoint regarding diversity, and ensure they regard it as an asset to the profession.”

Dr. West talked about her experience as a transgender woman, including the challenges she faced transitioning late in her career. She offered medical, social, and emotional insights into how ICU clinicians can more appropriately interact with, recognize, and validate transgender people as coworkers and patients. For example, some transgender patients have had surgery for voice pitch, which might make it difficult to insert a breathing tube. “Ultimately, transgender patients are like all patients; they want to be treated with respect, accepted for who they are, and have their needs met with competence,” said Dr. West. “When the most vulnerable are safe, everyone is safe.”

**How to Succeed When You’re the Only _____ in the Room**

This session addressed challenges faced by critical care professionals who may feel as if they are the only racial, gender, religious, or ethnic minority practicing in a critical care setting. Moderated by Dr. West, the session featured presentations by Dr. Sreedharan; Michaela A. West, MD, PhD, FCCM; and Wendy R. Greene, MD, FACS, FCCM.

“We hope that members who identify as being part of a historically underrepresented group will find this session helpful in navigating upward mobility in their careers,” said Dr. Shafeeq. “We want to empower our members, strengthen their viewpoint regarding diversity, and ensure they regard it as an asset to the profession.”

Dr. West talked about her experience as a transgender woman, including the challenges she faced transitioning late in her career. She offered medical, social, and emotional insights into how ICU clinicians can more appropriately interact with, recognize, and validate transgender people as coworkers and patients. For example, some transgender patients have had surgery for voice pitch, which might make it difficult to insert a breathing tube. “Ultimately, transgender patients are like all patients; they want to be treated with respect, accepted for who they are, and have their needs met with competence,” said Dr. West. “When the most vulnerable are safe, everyone is safe.”

**SCCM’s Commitment to DEI Will Continue**

SCCM’s pledge to address DEI is ongoing and evolving because diversity in the ICU is an asset. In 2020, SCCM updated and made more transparent its Standards of Professional Conduct to address DEI initiatives. In 2021, SCCM joined the Accreditation Council for Graduate Medical Education (ACGME) Equity Matters initiative, which introduces a framework for continuous learning and process improvement in DEI and antiracism practices.

Achieving DEI is a worthwhile and challenging endeavor that will carry on into SCCM’s future. DEI has become part of SCCM’s organizational DNA in the same way as multiprofessionalism has. Similarly, SCCM will continue working to advance health equity by offering special programs, many of them free, to underserved communities in the United States and globally. SCCM recognizes that it can and must do more. “Embracing the values of DEI in the ICU ensures better patient care and a better work environment,” said Dr. O’Donnell. “And by embracing DEI, SCCM and its members can lead by example.”

Download the 2021 Annual Report at www.sccm.org/annualreport to learn more about SCCM’s DEI goals. Read more about DEI sessions at the 2022 Critical Care Congress at sccm.org/diversityatcon22.
Many critical care practitioners are monitoring patients remotely from their clinics and offices. Practitioners use clinical data to provide ongoing management of patient care. Remote patient monitoring (RPM) is a technology used for the transmission of physiologic data via a device that has been approved by the U.S. Food and Drug Administration (FDA). RPM enables patient monitoring outside conventional clinical settings, such as in the home or a remote area, which may increase access to care and decrease healthcare delivery costs. RPM involves the constant remote care of patients by their physicians, often to track physical symptoms, chronic conditions, or post-hospitalization rehabilitation. A key component of RPM is wearable devices that allow medical professionals to monitor and diagnose patients without ever seeing them in the office.

FDA-approved devices can be found at https://bit.ly/3MRGrGH.

Common physiologic data that can be collected with RPM are weight, blood pressure (BP), and heart rate. Once collected, patient data is sent to a physician’s office via a special telehealth computer system or software application that can be installed on a computer, smartphone, or tablet.

RPM is frequently used to help patients who require chronic, post-discharge, or senior care. By connecting high-risk patients with RPM, healthcare organizations can keep track of potential health issues or patient data between visits. Additionally, RPM could be used...
by businesses to record Workers’ Compensation patients, making sure employees are on the right path to return to work.

The RPM device must digitally upload patient physiologic data (not self-recorded or self-reported by the patient). The device must be used to collect and transmit reliable and valid physiologic data that allows for understanding of the patient’s health status to develop and manage a plan of treatment.

**PM Technology**

RPM technology can range from handheld medical devices to online platforms that allow patients to input data. A few examples include:

- Glucose meters for patients with diabetes
- Heart rate or BP monitors
- Continuous surveillance monitors that can locate patients with conditions such as dementia and alert healthcare professionals to a fall
- Remote infertility treatment and monitoring
- Holter monitors

While RPM technology can vary depending on the device used or the condition monitored, most of the technology has similar components. One is a wireless-enabled sensor that can measure specific physiologic parameters and store the data it collects. This storage must also include a way to connect with additional sensors as well as healthcare professional databases and related applications. Applications typically provide users with an interface to track or analyze the data and display treatment recommendations.

The data collected by RPM devices are sent to the proper location and stored in a relational database, allowing healthcare organizations with wireless telecommunications data to be considered as either individual instances or in the context of an entire health history. Often, the device can alert patients when a healthcare professional has looked over the data or detects an issue that requires the patient to come in or requires patient intervention.

**CPT Codes 99457 and 99458**

- CPT code 99457 may be reported only once each 30 days.
- Codes 99457 and 99458 require live, interactive communication with the patient and caregiver and may only be reported once, regardless of the number of physiologic parameters monitored (real-time synchronous two-way communication).
- The device used to provide these services must be a medical device as defined and approved by the FDA and it must be ordered by a physician or other qualified healthcare professional (QHP).
- Remote physiologic monitoring treatment management (99457) is precluded from being reported for the same time period as home BP monitoring (99473).

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>99457</td>
<td>Remote physiologic monitoring treatment management services, clinical staff/physician/other qualified healthcare professional time in a calendar month requiring interactive communication with the patient/caregiver during the month; first 20 minutes</td>
</tr>
<tr>
<td>99458</td>
<td>Each additional 20 minutes (List separately in addition to code for primary procedure)</td>
</tr>
</tbody>
</table>

**Coding Guidance**

- CPT code 99453 is used to report the setup and patient education on use of the device.
- CPT code 99454 is used for supply of the device for daily recording or programmed alert transmission.
- Do not report if monitoring less than 16 days of data.
- Do not report 99353/99354 when reporting 95250 (glucose monitoring). CPT codes 99353/99354 are included in 95250.
Coding and Billing

Coding Guidance
- Do not report 99497/9498 with 99091.
- Time must be documented.
- Do not overlap time with transitional or chronic care management.
- A clinician cannot report 99091 more than once in a 30-day period.
- The time spent by the physician or other QHP (physician assistant, nurse practitioner, certified nurse specialist) includes:
  - Data accession
  - Review and interpretation
  - Modification of care plan when medically necessary (including communication to patient and/or caregiver
- Documentation
  - Total time must be documented for the 30-day period
  - Requires 30 minutes’ minimum time per 30 days
  - Whether services are provided on the same day as an evaluation and management (E/M) service (including a telehealth E/M service)
    » Considered part of E/M service and E/M cannot be reported separately
- Services must be medically necessary.
- Keep the documentation and time separate.

Self-Measured Blood Pressure Monitoring
Self-measured BP (SMBP) monitoring has been shown to be an effective approach to lowering BP, improving control in patients with hypertension, and increasing patient adherence with antihypertensive therapy. Also known as out-of-office BP measurement or home BP monitoring, SMBP monitoring uses a device that has been validated for clinical accuracy. Devices that measure BP over the upper arm remain the most accurate compared to other options and are the standard for proper BP measurement, preferred over finger, wrist, mobile health, and wearable devices.

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>99473</td>
<td>SMBP using a device validated for clinical accuracy; patient education/training and device calibration</td>
</tr>
<tr>
<td>99474</td>
<td>SMBP using a device validated for clinical accuracy; separate self-measurements of two readings one minute apart, twice daily over a 30-day period (minimum of 12 readings), collection of data reported by the patient and/or caregiver to the physician or other qualified healthcare professional, with report of average systolic and diastolic pressures and subsequent communication of a treatment plan to the patient</td>
</tr>
</tbody>
</table>

Coding Guidance
- Report CPT 99473 for patient education/training and device calibration.
  » Reported only once per device
- Report CPT 99474 for separate self-measurements of two readings, one minute apart, twice daily over a 30-day period with a minimum of 12 readings.

Coding Guidance
- This includes collection of data reported by the patient and/or caregiver to the physician or other QHP, with a report of average systolic and diastolic pressures and subsequent communication of a treatment plan to the patient.
  - Code 99474 is reported by the physician or other QHP for review of clinical staff-developed data and generation of a report that includes individual and mean systolic and diastolic BP readings from the recording period.
  - The physician or QHP then provides instructions to the clinical staff regarding care plan information to be communicated to the patient.
  - Code 99474 may be reported only once per calendar month.
  - Whether services are provided on the same day as an E/M service (including a telehealth E/M service)
    » Considered part of E/M service and E/M cannot be reported separately

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>95249</td>
<td>Ambulatory continuous glucose monitoring of interstitial tissue fluid via a subcutaneous sensor for a minimum of 72 hours; patient-provided equipment, sensor placement, hook-up, calibration of monitor, patient training, removal of sensor, and printout of recording</td>
</tr>
<tr>
<td>95249</td>
<td>Ambulatory continuous glucose monitoring of interstitial tissue fluid via a subcutaneous sensor for a minimum of 72 hours; analysis, interpretation, and report</td>
</tr>
<tr>
<td>95250</td>
<td>Ambulatory continuous glucose monitoring of interstitial tissue fluid via a subcutaneous sensor for a minimum of 72 hours; physician or other qualified healthcare professional (office) provided equipment, sensor placement, hook-up, calibration of monitor, patient training, removal of sensor, and printout of recording</td>
</tr>
</tbody>
</table>

Coding Guidance
- The physician or other QHP monitors glucose levels by continuous recording and storage of glucose values.
  - For CPT 95250, monitoring is performed with a clinician-provided non-invasive device that monitors glucose levels by insertion of a sensor in the subcutaneous tissue in the lower abdomen or other area.
  - The sensor measures the change in interstitial glucose is usually every five minutes.
  - After the patient has worn the sensor for a minimum of 72 hours, it is removed and the data from the monitor are downloaded into a computer.
  - Specialized software interprets the data and a technical report is generated.
  - Report 95251 for interpretation and report of the data.
  - Report 95249 when the equipment is furnished by the patient.
- With continuous technology advances, more patients can be monitored remotely. The devices used for RPM are proving to be effective and efficient in managing patient care.
SAVE THE DATE!

JANUARY 15-18, 2023 • ERNEST N. MORIAL CONVENTION CENTER • NEW ORLEANS, LOUISIANA, USA

The Society of Critical Care Medicine (SCCM) returns to in-person learning for the 2023 Critical Care Congress®. Join world-renowned experts and your colleagues in New Orleans for an immersive educational experience.

Acquire the latest knowledge and research
Build relationships and network
Immerse yourself in the local culture

Earn over 25 accredited continuing education hours and obtain access to all recorded sessions.

SCCM is a recognized leader in critical care education. The annual Congress has delivered an exceptional and comprehensive experience for over 50 years.

REGISTRATION OPENS THIS SUMMER AT SCCM.ORG/CONGRESS2023.
THE SOCIETY OF CRITICAL CARE MEDICINE (SCCM) has 15 specialty sections to accommodate members of different professions and disciplines. Members may join up to three sections for unique opportunities to network with colleagues and become more involved in projects and initiatives while advancing SCCM’s mission. For more information on joining a specialty section, visit sccm.org/membership.

**Anesthesiology Section**
SCCM’s Anesthesiology Section announced three newly elected Steering Committee members-at-large during its February 16, 2022, business meeting. We are delighted to welcome Suzanne Bennett, MD, FCCM, University of Cincinnati; Samuel M. Galvagno Jr, DO, MS, PhD, FCCM, University of Maryland; and Sara Nikravan, MD, FASE, University of Washington, who will serve the 2022-2024 term.

Gozte Demiralp, MD, and Talia K. Ben-Jacob, MD, MSc, FCCM, are actively recruiting additional section members interested in participating in the section’s new Diversity, Equity, and Inclusion Subcommittee. Those interested in applying should email gdemiralp@wisc.edu and/or ben-jacob-talia@CooperHealth.edu.

The 2022 Critical Care Congress was held virtually April 18 through April 21, 2022. The section’s Year in Review session was held on April 19 and featured the top 10 publications of 2021 and topical reviews about perioperative intensive care of the liver transplant recipient and high-risk parturient. Section members were involved in many Congress sessions. Thank you for showing them your support! Thanks also to Meghan B. Lane-Fall, MD, MS, FCCM, for her tireless efforts as one of the 2022 Congress cochairs.

Numerous section members have been recognized for their organizational and/or national contributions to the practice of multiprofessional critical care. A full listing of Presidential Citation Award recipients, American College of Critical Care Medicine inductees, and other honors is available at https://bit.ly/3IKWT9g.

Congratulations to our two Congress Scholarship award recipients, both for this recognition and for their impactful research. Vanessa Mazandi, MD, was recognized for her abstract, “Effects on Mitochondrial Dynamics Following Therapeutic Intervention in Large Animal TBI Model.” Daniel E. Leisman, MD, MSCR, was recognized for his abstract, “Renin-Angiotensin System Markers and Nonpulmonary Organ Injury in Severe COVID-19 Pneumonia.”

**Clinical Pharmacy and Pharmacology Section**
Check out the Clinical Pharmacy and Pharmacology (CPP) Section’s new Twitter handle, @SCCM_CPP. Follow us and use #PharmICU to promote critical care pharmacy and the CPP Section. The Patient Safety Update Newsletter, CPP Section Newsletter, and mini-interviews are available on SCCM Connect.

CPP Journal Clubs are held monthly on the third Friday at 2:00 p.m. Eastern Time. Watch for upcoming 2022 research webinar announcements. Check out the new mini-interviews, including a collaboration with the Practice Advancement Committee (PAC) involving pharmacists on SCCM Council!

Thank you to those who attended SCCM’s 2022 Critical Care Congress! The Year in Review: Pharmacy session was held on April 19, moderated by Joanna L. Stollings, PharmD, FCCM. Speakers included Melissa Santibanez, PharmD (infectious diseases); Keaton S. Smetana, BCCCP, PharmD (nutrition); and Patrick M. Wieruszewski, BCCCP, PharmD (cardiology).

Join the CPP Mentor-Mentee Program as a mentor or mentee to build your network and help with professional development.

The PAC continues to host live interviews on pharmacists’ unique clinical practices and promote members’ leadership development. Watch for a pharmacist-to-patient ratio survey study, future interviews, and programming.

The Patient Safety Committee hosted its Pharmacy Safety Net(work) Series on February 25, 2022. This resident-led, interactive discussion focused on safety considerations for analgesic and sedative infusions.

Congratulations to Jessica Cercone, PharmD; Serena Dine, PharmD, BCPS, BCCCP; and Susan Elizabeth Smith, PharmD, BCPS, BCCCP, who received CPP Section Awards, and to Steven J. Martin, BCPS, PharmD, FCCM, who received the Distinguished Service Award.

Please reach out to CPP chairs and chair-elects if you are interested in volunteering on any of the committees this year.

**Emergency Medicine Section**
The Emergency Medicine Section met virtually for its annual business meeting on February 28, 2022. More than 40 people attended the meeting, which included section updates, ways to get involved, and section research and career growth. Awards were given to five members for their exciting research:

- Paul E. Pepe, MD, MPH, FAEMS, MCCM, for research on a head-up CPR bundle
- Brian M. Fuller, MD, MSCI, FCCM, for research on the sustainability of lung-protective ventilation in the emergency department
- Nicholas M. Mohr, MD, FCCM, for research on the use of telemedicine to reduce mortality in rural sepsis patients treated by nonphysician clinicians
- Randi L. Connor-Schuler, MD, for research on the use of point-of-care ultrasound transcranial Doppler in vasospasm
- Bailey Buenger, PharmD, for a study looking at bupivacaine in cardiothoracic surgery patients

Dr. Connor-Schuler received the section’s new Early Investigator Award, and Dr. Buenger received the new In-Training Award. Cassidy M. Dahn, MD, was introduced as the section’s new member-at-large after a very close election. The Professional Development Subcommittee, led by Namita Jayaprakash, MD, introduced invited speaker Rade B. Vukmir, MD, JD. Dr. Vukmir spoke about contract negotiations for emergency medicine and critical care medicine physicians, including ways to shape your career; it was a very informative talk enjoyed by all attendees. The meeting concluded with breakout sessions for member networking.

Thank you to those who attended the 2022 Critical Care Congress in April. Please contact the Steering Committee with any questions. A video of the meeting will be posted to SCCM Connect.

**Surgery Section**
The Surgery Section is off to a strong start to 2022! On January 24, 2022, under the leadership of then-outgoing Surgery Section Chair...
Salman Ahmad, MD, FACS, FCCM, we held a virtual Surgery Section business meeting highlighting achievements, including successful nominations for prestigious awards. Tina L. Palmieri, MD, MCCM, a burn and critical care surgeon from UC Davis in Sacramento, California, was inducted as a Master of Critical Care Medicine. I am humbled to have been chosen as the recipient of the 2022 Shubin-Weil Master Clinician/Teacher: Excellence in Bedside Teaching Award. Ten Surgery Section members were inducted as Fellows of Critical Care Medicine. We are indebted to Dr. Ahmad for several years of leadership in the Surgery Section, culminating with a very successful year as Surgery Section Chair.

The section has a fantastic leadership team, and we urge section members to join one of our committees:

**Leadership**
- Kathleen B. To, MD, FCCM, Chair-elect
- Niels D. Martin, MD, FCCM, Secretary/Treasurer

**Membership Committee**
- Allison J. Tompeck, MD, FACS, Chair
- Mark E. Hamill, MD, FCCM, Vice-Chair

**Education Committee**
- Nicole Siparsky, MD, FACS, Chair
- Natasha Keric, MD, FACS, Vice-Chair

**Patient Safety Committee**
- Ariel P. Santos, MD, MPH, FCCM, Chair
- and social media guru
- Jong O. Lee, MD, FACS, FCCM, Vice-Chair

**Strategic Planning Committee:**
- Kristine A.K. Lombardozzi, MD, FCCM, Chair
- and professional development opportunities, collaborative research projects, outreach, mentorship, and networking.

Please save the date for our 40th Annual Scientific Symposium and Pre-Conference Pharmacology Course, to be held June 9-10, 2022, in Roanoke, Virginia. This will be an in-person symposium with a virtual option. Registration is available online at cvcsccm.org.

CVCSCCM has several committees that provide excellent opportunities for networking, collaboration, and professional growth! These committees include: Communications, offering chapter newsletters and Twitter Journal Clubs; Education, responsible for coordinating the Annual Symposium and chapter educational activities; Membership, focusing on recruitment and retention; Nominations, soliciting nominations for the Board of Directors; Outreach, providing local and global outreach opportunities; and Research, promoting collaborative research opportunities across the region. If you are interested in joining any of these committees or would like more information about how to get involved, please fill out our new “Join a Committee” form on the home page of cvcsccm.org or email cvcsccm@gmail.com.

Please follow us on social media to stay up to date with chapter news! Find us on Facebook at SCCM Carolinas/Virginias Chapter (CVCSCCM) and on Twitter: @CVCSCCM.

**Michigan Chapter Reinstatement of the SCCM Michigan Chapter in Midst of a Pandemic**

The years 2020 to 2022 during the COVID-19 pandemic is a time we will never forget. Healthcare systems around the globe continue to be under immense pressure, testing the limits of all healthcare workers. As a healthcare community, we felt the undeniable need for collaboration, solidarity, and commitment to patients during this global catastrophe. Michigan was hit especially hard by the pandemic. In the early phases of COVID-19, the reinstatement of the SCCM Michigan Chapter was conceptualized. The pandemic helped to connect hospitals, allowed for networking and distribution of resources during this dire time. Reestablishing the Michigan Chapter also created a platform to connect clinicians, hospitals, and institutions and to foster collaboration to promote research and to gain better access to quality patient care, resources, and best practices.

For the purpose of equal geographic representation, Michigan was divided into four zones—central, northern, southeast, and western. Two representatives were elected from each zone to form the Michigan Chapter’s board of directors. Committees were formed, including Membership, Education, and Communication. The members of the board of directors and committees are a diverse group of professionals including physicians from many specialties, as well as nurses and pharmacists, offering the promise of a multiprofessional team approach.

With humble beginnings and social restrictions posed by the pandemic, we were faced with the daunting task of promoting our Michigan Chapter. We relied on word of mouth, email, and social media and created our own website to reach out to healthcare professionals across the state. Since commencement, we have proudly grown to 189 members.

In the era of COVID-19, academic conferences moved to virtual platforms to overcome the limitations of physical interaction and mitigate the spread. In 2021, the Michigan
Chapter successfully conducted spring and fall webinars, providing continuing education for physicians, fellows, residents, nurses, pharmacists, and respiratory therapists. We were fortunate to have lectures by well-known speakers on clinically relevant topics. The first virtual seminar was appropriately titled, “COVID-19, Typical or Atypical ARDS.” The fall webinar, based on needs assessment, was “Right Ventricular Failure Management in Critically Ill Patients.” Our first annual SCCM Michigan Chapter Scientific Symposium was held on May 25, 2021, with over 60 registered participants. There were 32 abstracts, including 16 case reports and 16 research projects. This symposium also provided an opportunity for trainees to exhibit their work and discuss challenging and interesting cases. The top two scorers in clinical cases and research projects were awarded prizes at the end of the scientific symposium.

As we navigated through this crisis, we realized that this chapter has evolved into a valuable asset in the community. Our chapter has now become indispensable in preparing and equipping healthcare professionals not only to face the hardships posed by the pandemic but also to prepare for a better and more resilient tomorrow. We strive to be multiprofessional, inclusive, accessible, and educational.

Suneesh Anand, MD
Rania Esteitie, MD, FCCP
Heather S. Dolman, MD, FCCM
Lisa Hall Zimmerman, PharmD, FCCM

**Texas Chapter**

The Texas Chapter of SCCM has been quite productive this past quarter. Since September 2021, we have held seven meetings in Houston, two in Dallas-Fort Worth, two in San Antonio, one in Austin, and one in El Paso, showcasing various topics from “Identification and Mitigation of False Positive CLABSI” to “Averyca” Clinical Profile Review and ICU Case Evidence.”

Additionally, we held our Annual Symposium October 8-9, 2021 which was attended by over 200 guests. We were very fortunate to have our keynote address by 2021-2022 SCCM President, Lewis J. Kaplan, MD, FACS, FCCP, FCCM. Twelve groups presented completed research or quality improvement projects and two groups presented case reports. Several sessions centered around the symposium theme, “ICU: It’s All About Resilience.”

Outstanding members of the 2021-2022 year included:
- Houston: Jeannee Campbell, PA-C
- San Antonio: Kirstin Henley, MD, MSc
- El Paso: Jennifer M.J. Hartman, PharmD, BCPS, BCCCP
- Dallas-Fort Worth: Meagan Johns, PharmD, MBA
- Austin: Laura A. Guerrero, AGACNP-BC

Excellence in Service Awards for the 2021-2022 year included:
- Clinical Practice: Nisha Rathi, MD, MD Anderson Cancer Center
- Education: Deepa B. Gotur, MD, FCCP, FCCM, Houston Methodist Hospital
- Research and Quality Improvement: Anne Rain Tanner Brown, PharmD, BCCCP, FCCM, MD Anderson Cancer Center

Our Excellence in Leadership Award for the 2021-2022 year was awarded to:
- Maggie Ma, PharmD, BCPS, MD Anderson Cancer Center

Lastly, we have elected several new members to the board of directors as well as chapter leadership members and are excited to kick-start the 2022-2023 year!
Critical Care Ultrasound: Adult Smart Course

Get the realistic training needed to perform and interpret ultrasound imaging. Study online as your time permits on an easy-to-use platform, then attend an in-person, hands-on skill training session led by expert faculty. Skill stations are offered several times each year.

These courses include:
- Online access to ultrasound presentations by expert faculty
- In-person, hands-on skills training
- A copy of Comprehensive Critical Care Ultrasound, Second Edition
- Adult ICU quick reference guide

Critical Care Ultrasound: Adult Smart Course
Increase your ultrasound diagnostic skills and scanning proficiency. Topics include:
- Cardiac output
- Left/right ventricular function
- Focused assessed transthoracic echocardiography examination
- Vascular ultrasound
- And much more

Advanced Critical Care Ultrasound: Adult Smart Course
Further expand your fundamental echocardiographic skills and knowledge. Topics include:
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- Hemodynamic measurements
- Focused echocardiographic evaluation in life support algorithm
- And much more

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Best Practices for Managing Staff Shortages


References and Disclosures


